HAWAII ADMINISTRATIVE RULES

TITLE 11

DEPARTMENT OF HEALTH

CHAPTER 23

UNDERGROUND INJECTION CONTROL

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§11-23-01 Purpose. The purpose of this chapter is to establish a state underground injection control (UIC) program in order to protect the quality of the state's underground sources of drinking water (USDW) from pollution by subsurface disposal of fluids. Toward this end, conditions are specified to govern the location, construction and operation of injection wells so that injected fluids do not migrate and pollute USDW. This chapter establishes minimum standards and counties are not precluded from establishing more stringent standards. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §144.1)

§11-23-02 Scope. This chapter covers any injection well as herein defined in this chapter. Excluded from this chapter are:

(1) Individual wastewater systems (IWS) serving single family residential households which generate a volume of domestic sewage less than one thousand gallons per day (gpd);

(2) Non-residential waste disposal systems which receive solely sanitary wastes from buildings that generate less than one thousand gpd of wastewater;

(3)Test borings used for geotechnical and/or hydrologic investigations, provided that those borings are plugged with impermeable material upon completion of the investigation; and

(4)Wells which are used for ground stabilization by the injection of a grout or by vertical relief of excess soil pore pressures. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.1(e), 146.1 and 146.5)

§11-23-03 Definitions. As used in this chapter:

"Abandon" means to permanently discontinue usage; temporary or intermittent cessation of operation does not constitute abandonment. An abandoned well need not necessarily be a sealed well.

"Aquifer" means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well, tunnel or spring.

"Artesian" means a hydrologic condition whereby groundwater is confined, under pressure greater than atmospheric, by overlying, relatively impermeable strata. Because of hydrostatic pressure, the piezometric surface of an artesian aquifer rises above the bottom of the (upper) confining bed.

"Building" means a structure, permanent or temporary, built, erected and framed of component structural parts designed for the housing, shelter, workplace, enclosure or support of persons, animals or property of any kind.

"Caprock" means a geological formation or formations composed of terrigenous or marine sediments deposited over a formation or formations of volcanic origin. Caprock is substantially less permeable than volcanic formations, and is considered a "confining material".

"Confining materials or zone" means a geological formation or part of a formation capable of preventing or severely retarding fluid movement between different geological formations; used interchangeably with "aquiclude".

"Contaminant" means any substance or matter which causes, directly or indirectly, a physical, chemical, biological, or radiological change in the existing water quality; used interchangeably with "pollutant".

"County" means any county of the State, including Kalawao county on Molokai.

"Department" means the department of health, State of Hawaii.

"Director" means the director of health or a duly authorized representative.

"Disposal well" means a well used for the disposal or emplacement of fluid or fluids, either by gravity flow or under pressure, into subsurface strata; often used interchangeably with "injection well".

"Exempted aquifer" means an aquifer or a portion thereof that is exempted from being used as an USDW by the director.

"Existing well" means a well which was in operation or had received official sanction from all of the necessary agencies, before July 6, 1984.

"Fluid" means any material or substance which flows or moves, whether a semisolid, liquid or gas.

"Formation" means a body of rock characterized by a degree of lithologic homogeneity or similarity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

"Geohydrologic formation" means any formation capable of transmitting fluids by saturated flow, unsaturated flow or a combination thereof.

"Geologist" means a person with a bachelors or higher degree in geologic sciences from an accredited college or university and a minimum of one year experience in well logging and testing.

"Ground water" means water below the land surface in a zone of saturation.

"Grouting" means the operation whereby a cement slurry is forced behind the casing for such purposes as: sealing the casing to the walls of the hole, preventing undesirable leakage of fluids out of the hole, and preventing migration of liquids or gases into the hole; or is pumped into a drill hole or well for plugging and abandonment.

"Hazardous waste" means a hazardous waste as defined extensively in Code of Federal Regulations (CFR), Title 40-Protection of Environment, section 261.3 dated July 1, 1990.

"HRS" means Hawaii Revised Statutes.

"Individual wastewater system (IWS)" means the facility which disposes of treated or untreated domestic wastewater generated from a room or group of rooms forming a single habitable unit, including, but not limited to, cesspools, septic tanks and household aerobic units.

"Industrial" means associated with a productive enterprise using machinery and mechanical power or human power or both, including such enterprises as power generation and crop production.

"Inject" means to dispose or emplace fluids, either under pressure or by gravity flow, into a subsurface formation or formations.

"Injection pressure" means the head increase in the well bore with respect to the static ground water level; where head refers to the total energy of the fluid at any given point; and in ground water the main components of head are elevation and pressure.

"Injection well" means a well into which subsurface disposal of fluid or fluids occurs or is intended to occur by means of injection.

"Makai" means toward the sea or the area outside the UIC line encircling the protected aquifer.

"Mauka" means toward the mountains or the encircled protected aquifer.

"Modify" means to make a minor or a basic change in the physical characteristics or the operational status of a well.

"Person" means any individual, partnership, firm, association, public or private corporation, trust estate, the federal, state or county governments or any of their agencies, or any other legal entity.

"Pollute" means:

(1) To alter the physical, chemical, biological or radiological properties of any state waters or USDW, including but not limited to temperature, taste, potability, mineral content, turbidity, color or odor; or

(2) To discharge any liquid, gaseous, solid, radioactive, or other substances, into any state waters as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to public health, safety or welfare, including harm, detriment, or injury to public or private drinking water supplies.

"Sewage" means waste from all plumbing fixtures in residences, institutions, public and private buildings, and other places of human habitation, employment or recreation, whether treated or not by public or private sewage treatment plants.

"State" means State of Hawaii.

"UIC" means the underground injection control program under Part C of the Safe Drinking Water Act (P.L. 93-523) and chapter 340E, HRS.

"UIC line" or "the line" means the line on the department of health UIC maps which separates, in plan view, exempted aquifers and USDW.

"Underground source of drinking water (USDW)" means an aquifer or its portion:

(1) Which supplies any public or private drinking water system; or contains a sufficient quantity of ground water to supply a public water system; and

(A) Currently supplies drinking water for human consumption; or

(B) Contains fewer than ten thousand milligrams per liter (mg/L) total dissolved solids (TDS); and

(2) Which is not an exempted aquifer.

"Volcanic" means material originating from a volcano; often, basaltic lava.

"Waste" means any solid, liquid or gaseous matter, whether treated or not, which, when injected, may pollute or tend to pollute the lands or waters, including, but not limited to, sewage; effluent; offal; garbage; refuse; and industrial, agricultural or radioactive fluids.

"Waste disposal system" means an excavation in the ground receiving wastes which functions by allowing fluids to seep through its bottom, sides or both, including cesspools, septic tanks, and seepage pits.

"Well" means a bored, drilled or driven shaft, or a dug hole, whose depth is greater than its widest surface dimension.

The publications referred to or incorporated by reference in this chapter are available from the offices of the department of health. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.3 and 146.3)

§11-23-04 Classification of exempted aquifers and underground sources of drinking water. (a) Upon request, and with concurrence of the director, the department shall review the aquifer designations. The aquifer designations shall be reviewed at least every three years. In its review, the department may amend the status of an aquifer in accordance with chapter 91, HRS. The criteria for exempting aquifers from underground source of drinking water (USDW) status is as follows:

(1) The aquifer does not currently serve as a source of drinking water; and

(2) The aquifer cannot now and will not in the future serve as a source of drinking water because of any of the following criteria:

(A) It is situated at a depth or location which currently makes recovery of water for drinking water purposes economically or technologically impractical; or

(B) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

(C) The total dissolved solids (TDS) concentration of the ground water is more than five thousand mg/L, and it is not reasonably expected to supply a public or private drinking water system.

(b) The UIC maps shall indicate exempted aquifers and USDW, in plan view, by use of a UIC line, and such maps are an integral part of this chapter. The department's UIC maps shall be the final authority for the identification of the aquifer boundaries on the land surface. Copies of the maps and this chapter are available for examination at an office of the department's environmental protection and health services division, the district health offices and other department offices on each island.

(c) Unless expressly exempted, all aquifers are considered to be USDW. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.7, 146.4 and 146.52)

§11-23-05 Identification of exempted aquifers and USDW. (a) The department has designated the following formations as exempted portions of aquifers: in the horizontal dimension, lands which are makai of the UIC line; and in the vertical dimension:

(1) Where the volcanic formation is a non-artesian aquifer, the entire geologic column; or

(2) Where the volcanic formation is an artesian aquifer, from the subaerial ground surface down to fifty feet above the contact between the artesian volcanic aquifer and the overlying confining materials.

(b) Unless an aquifer is expressly exempted, as described above or depicted on the department-issued UIC maps, it is an underground source of drinking water.

(c) In areas where the UIC line is defined by a roadway, a setback of one lot or one hundred fifty feet, whichever is less, from the mauka property line of that roadway may be considered to be within the exempted area. If the roadway is within a property, the setback shall extend to the mauka property line or to one hundred fifty feet from the mauka edge of said roadway, whichever is less. This interpretation of the UIC line shall be subject to all other conditions of this chapter. The applicant, on the permit application, shall request this interpretation, approval of which shall be based on the proximity and sensitivity of drinking water sources.

[Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.7 and 146.4)

§11-23-06 Classification of injection wells. (a) The h time interested persons may submit their written views with respect to the UIC application. All written comments submitted during th Wells in classes I through IV are prohibited and are defined as follows:

(1) Class I. Wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water and which are used by:
   (A) Generators of hazardous waste or owners or operators of hazardous waste management facilities; and
   (B) Disposers of industrial and municipal waste fluids.

(2) Class II. Wells which inject fluids:
   (A) Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection;
   (B) For enhanced recovery of oil or natural gas; and
   (C) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(3) Class III. Wells which inject for extraction of minerals including:

(A) Mining of sulfur by the Frasch process;

(B) In-situ production of uranium or other metals, using unconventional techniques to mine ore bodies; and

(C) Solution mining of salts or potash.

(4) Class IV. Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into any geohydrologic formation or a formation, which, within one-quarter of a mile of the well, contains an underground source of drinking water (USDW), even if exempted.

(b) Without exception, only class V wells shall be permissible and are defined as follows:

(1) Subclass A. Injection wells which inject fluids into an underground source of drinking water. Subclass A wells include:

(A) Sewage injection wells; and

(B) Industrial disposal wells other than those classified under subclasses AB or B.

(2) Subclass AB. Injection wells which inject only into exempted aquifers. Subclass AB wells include:

(A) Sewage injection wells; and

(B) Industrial disposal wells, other than those classified under subclass B, such as brine disposal wells used in a desalinization process.

(3) Subclass B. Injection wells which inject non-polluting fluids into any geohydrologic formation, including underground sources of drinking water. Subclass B wells include:

(A) Air conditioning return flow wells used to return the water used for heating or cooling in a heat pump;

(B) Cooling water return flow wells used to inject water previously used for cooling;

(C) Recharge wells used to replenish, augment, or store water in an aquifer;

(D) Salt water intrusion barrier wells, used to prevent the intrusion of salt water into fresh water, if they inject water of equal or lesser chloride concentration as that portion of the aquifer into which injected;

(E) Wells used in aquaculture, if the water in the receiving formation has, either:
(i) An equal or greater chloride concentration as that of the injected fluid; or
(ii) A total dissolved solids concentration in excess of five thousand mg/L.
(F) Injection wells used in an experimental technology, which is one that has not been proven feasible under the conditions in which it is being tested; and
(G) All wells not included in subclasses A, AB, C, D, or E of class V or in classes I through IV.

(4) Subclass C. Injection wells which inject surface fluids, i.e., storm runoff, into any geohydrologic formation.

(5)Subclass D. Injection wells which inject overflows, or relief flows, from potable water systems into any geohydrologic formation.

(6) Subclass E.

(A) Injection wells associated with the development and recovery of geothermal energy, provided that the geothermal effluent will be injected at a depth that will not be detrimental to underground sources of drinking water. If injection is to occur below the basal water table, the receiving formation water shall be tested and injection allowed if the receiving water has, either:
(i) An equal or greater chloride concentration as that of the injected fluid; or
(ii) A total dissolved solids concentration in excess of five thousand mg/l; or
(iii) An equivalent or lesser water quality than the injected fluid.

(B) Subclass E injection wells include:
(i) Brine injection wells for the disposal of excess water from the steam-flashing process;
(ii) Condensate injection wells for the disposal of condensate from electric generators; and
(iii) Gas injection wells for the disposal of non-condensible gases entrained in an aqueous solution. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.6 and 146.5)

§11-23-07

§11-23-07 Prohibition. (a) Without exception, any injection well not defined by class V in section 11-23-06 shall not be permitted to be constructed, operated or to exist in the State. Class V injection wells shall be permitted to be constructed, modified and operated to the extent provided by, and subject to, the requirements of this chapter.

(b) No new subclass A well shall be constructed or operated in an underground source of drinking water after July 6, 1984.

(c) No injection well owner or operator shall construct, operate, maintain, or close its injection well unless authorized by this chapter, a permit, or an order to do so.

(d) No injection well owner or operator shall violate any term of any written authorization, including those relating to inspection, monitoring, recordkeeping, and reporting.

[Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.11, 144.12, 144.24 and 146.52)

§11-23-08 Construction conditions. (a) No injection well shall be constructed unless, prior to the start of any construction:

(1) Application is made for a UIC permit and all application procedures set forth in sections 11-23-12 through 11-23-15 are completed;

(2) It is shown that the proposed injection well will comply with this chapter; and

(3) The department, upon satisfaction of the requirements set forth in paragraphs (1) and (2), approves the start of construction.

(b) Approval of the start of the construction of any injection well shall not be construed as approval for the operation of that injection well. Further, the approval of the start of construction does not guarantee the approval to operate upon completion of the injection well. Permits shall be issued only in accordance with this chapter and it is the duty of the applicant to insure compliance with the law and this chapter.

[Eff. 7/6/84 ; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2)

§11-23-09 Siting and pre-construction requirements. (a) Any new injection well, other than subclass D injection wells, shall be sited beyond an area which extends at least one-quarter mile from any part of a drinking water source. This includes not only the surface expression of the water supply well, tunnel or spring, but also all portions of the subsurface collection system which may extend laterally, either at right or inclined angles to the ground surface. The area of protection shall be delineated by a reasonably smooth curve drawn to connect the points extending one-quarter mile beyond the most extensive portions of the drinking water source and its collection system.

(b) Where the surface expression of an existing drinking water source drawing from an artesian aquifer is located in an exempted caprock aquifer, a new injection well, other than a subclass D injection well, shall be located, in addition to subsection (a) of this section, outside an area measuring one-half mile wide, which is bisected by a line running hydrologically upgradient from the surface expression of the drinking water source to the UIC boundary line. This condition also applies to any future drinking water source which may be sited in an exempted aquifer.

(c) For a proposed injection well which is sited mauka of the UIC boundary line, in addition to meeting the minimum distance requirement in subsection (a) of this section, the department shall require the applicant to submit water quality data representative of local conditions as part of the application. Where water quality data is lacking or insufficient to determine the areal water quality, the department may require the applicant to collect representative water samples from the injection well during construction. The samples shall be collected and analyzed, in accordance with standards and methods established in chapter 11-20, entitled "Rules Relating To Potable Water Systems". The parameters for which values shall be identified are, at least, the following:

(1) Chloride concentration,

(2) Total dissolved solids (TDS), and

(3) Coliform - Total; if found, then fecal and streptococcus determinations.

(d) The variety of injection wells and their uses dictate a variety of construction designs consistent with those uses, and precludes specific construction standards for each type of injection well outlined in this chapter. However, an injection well shall be designed for its intended use, in accordance with good engineering practices as recommended by the Honolulu Board of Water Supply's "Water System Standards", dated March, 1977.

(e) Vertical migration resulting in undesirable mixing of fluids from aquifers of substantially different water quality (due to improper well construction or use of an injection well) shall be prevented by preserving the integrity of the confining zone or zones by grouting or some other method acceptable to the department.

(f) If a large void, such as a lava tube or solution cavity, is encountered during drilling, where the drill rod drops more than three feet, measures shall be taken to prevent unacceptable migration of the injected fluids. The owner shall either verify that the void does not slope inland or construct the well in such a manner that wastes are not injected directly into the void. For the first option, a test boring which verifies the void's inclination inland of the wellsite shall be drilled. For the second option, the section of the well casing which passes through the void shall be without openings. Either the perforated casing shall be replaced with solid casing, or the holes in the casing shall be sealed by grouting or in some other manner approved by the department. The owner shall notify the department to arrange discussion and approval of any corrective actions. Scheduling of the procedures shall be arranged so that the departmental staff may observe the remedial operations. The final responsibility for remedial design, implementation and performance shall rest with the consulting engineer.

(g) Departmental staff shall have the right to enter property during normal working hours, without advance notification, for the purpose of observing injection well construction methods and progress. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §§340E-2 and 340E-9, 40 CFR §§144.12, 144.51 and 146.6)

§11-23-10 Provision for artesian aquifer protection. (a) Where an injection well is located in a caprock formation which overlies volcanic USDW under artesian pressure, the following conditions shall be applied:

(1) A buffer zone of at least fifty feet of the confining materials (caprock) or other impermeable substance, shall remain between the bottom of the injection well and the top of the volcanic aquifer, and

(2) Injection pressure, as measured at the feed elevation or well head, shall remain below the hydrostatic pressure of the volcanic aquifer (the artesian head) or two p.s.i., whichever is greater.

(b) The locations of artesian aquifer areas are described generally. The major areas, which have an extensive caprock formation, include:

(1) The southern coastal plains of Oahu, from Kahe Pt. (West Beach) to Wailea Pt. (Lanikai);

(2) The windward (eastern) coastal plains of Oahu, from Makalii Pt. (Punaluu) to Waialee;

(3) The northern coastal plains of Oahu, from Haleiwa to Mokuleia; and

(4) The Mana Plain on western Kauai, from Polihale to Kekaha.

Other artesian aquifer areas are found in valleys, where alluvium or other sedimentary material has been deposited to significant depths.

(c) If the ratio of the depth of the proposed injection well, to the estimated depth of caprock less fifty feet, is 1:2 or less, the applicant need not extend the depth of the injection well or wells in order to verify caprock thickness, prior to completion at the shallower proposed depth. The department shall estimate the depth of caprock by comparing lithology from logs of borings in the vicinity. If, however, artesian aquifer conditions are encountered, the applicant shall have the options as set forth in subsection (f). The following is a table showing the depths needed to achieve the 1:2 ratio:

Proposed depth of injection well:	10	15	20	25	30	40	50	60	70	80	90	100
Minimum depth of caprock:	70	80	90	100	110	130	150	170	190	210	230	250

(d) If the ratio of the depth of the proposed injection well, to the estimated depth of caprock less fifty feet, is greater than 1:2, the applicant shall have the depth of the injection well temporarily extended by fifty feet to verify that artesian aquifer conditions are not encountered within that range. The fifty feet of extended hole shall be properly sealed by the tremie method, with a cement slurry that contains no more than five gallons of water per ninety-four pound sack of cement.

(e) Where a test well is planned for either a single injection well or a multiple well field, the depth of the test well shall be extended fifty feet into confining materials beyond the proposed depth of the deepest well. If the test well is intended to be operational, the lower fifty feet shall be properly sealed as detailed in subsection (d) of this section.

(f) Where artesian aquifer conditions are unexpectedly encountered, the applicant may choose to:

(1) Abandon and properly seal the injection well with neat cement and request approval for a new location; or

(2) Modify the depth of the injection well or wells so that it conforms with subsection (a)(1). [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.11 and 144.12)

§11-23-11 Operating conditions. (a) No injection well shall be operated, modified or otherwise utilized without a UIC permit issued by the department. Only subclass C wells that meet the requirements of section 11-23-12(f) shall be exempt from obtaining a UIC permit to operate.

(b) No person shall construct, operate, maintain, convert, plug, abandon or conduct any other injection activity in a manner which allows the movement of fluid containing a contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any national or state primary drinking water rule or may otherwise adversely affect the health of one or more persons.

(c) All injection wells shall be operated in such a manner that they do not violate any of the department's administrative rules under title 11, Hawaii Administrative Rules, regulating various aspects of water quality and pollution, and chapters 342-B, 342-D, 342-F, 342-H, 342-J, 342-L, and 342-N, HRS. The rules include:

(1) Chapter 11-20, "Rules Relating To Potable Water Systems";

(2) Chapter 11-62, "Wastewater Systems"; and

(3) Chapter 11-55, "Water Pollution Control".

(d) The operation of all injection wells shall also conform to any limitations on quantity and quality of the injected fluid as are deemed appropriate by the director for the purposes of this chapter.

(e) If at any time the department learns that an injection well may cause a violation of primary drinking water rules, the department shall order the injector to take such actions as may be necessary to prevent the violation, including, where required, cessation of operation of the injection well.

(f) Notwithstanding any other provision of this section, the department shall issue a cease and desist order, effective immediately, upon receipt of information that a contaminant which is present in, or likely to enter, a system, or underground source of drinking water, supplying water for human consumption, poses an imminent and substantial danger to the health of a person or persons. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §§340E-2 and 340E-4, 40 CFR §§144.11, 144.12, 144.24, 144.25, 144.31, 144.40 and 146.52)

§11-23-12 Application procedures for UIC permit. (a) No person shall operate, modify or abandon an injection well or wells without first obtaining a UIC permit from the department. Only subclass C wells that meet the requirements in subsection (f) of this section shall be exempt from obtaining a UIC permit to operate. Further, no person shall start construction of an injection well without first applying for a permit and obtaining the department's approval for the start of construction.

(b) All permit applications shall be made by the injection well owner on authorized departmental forms which shall be available at department offices. In the case of leasehold land, the applicant shall submit written proof of the consent of the land owner. In the case of a modification, the legal operator, with the written consent of the owner, may submit the application.

(c) An applicant may apply for a system permit rather than apply for each individual injection well if the wells meet all of the following conditions:

(1) Are owned by the same person;

(2) Are operated by the same person;

(3) Are similarly designed;

(4) Serve the same purpose; and

(5) Inject into the same aquifer or injection zone at the same property.

(d) All applications shall be submitted with a filing fee of $100 for each application. Any government agency shall be exempt from paying this filing fee. Additionally, when public notice is required, as provided in section 11-23-14, the applicant shall pay all fees assessed for publishing legal notice or notices for each application requiring public notice. If a public hearing is required, as provided in section 11-23-15, the applicant shall pay all fees assessed for publishing legal notice or notices for each application requiring such notice.

(e) The department shall not consider any incomplete application. An application is deemed complete when:

(1) All requested information has been submitted, including the application form, plans, maps and other exhibits;

(2) All fees have been paid; and

(3) All public notice and hearing requirements under sections 11-23-14 and 11-23-15 have been satisfied.

(f) All applications for the use of subclass C wells to inject storm runoff shall be reviewed by the department for the determination of whether or not an applicant shall be required to obtain a UIC permit to operate the wells. The determination for an exemption of a UIC permit for such wells shall be made by the director and shall be predicated on the conditions submitted in the UIC application. If an exemption is granted, the operating conditions as submitted in the application shall remain unchanged for the subclass C wells. If any of the operating conditions should change over time, a new application shall be submitted by the owner of the wells for review by the department for the purpose of determining the need for a UIC permit. The determination for a permit exemption shall be based on, but not limited to:

(1) The location and design of the injection wells;
(2) The surrounding land areas contributing runoff to the injection wells;
(3) The potential for the inclusion of contaminants in the runoff;
(4) The impact on underground sources of drinking water; and
(5) The comments received during the public notice period or public hearing, or both, for proposed subclass C wells injecting into underground sources of drinking water. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.24 and 144.33)

§11-23-13 Submission of data. (a) Each applicant shall provide the following:

(1) Facility name and description;
(2) Facility location, including street address and zip code;
(3) Tax map key (TMK) number and map at the most detailed scale available, showing the location of the proposed injection well or wells on the property, the correct scale and north arrow;
(4) USGS topographic quadrangle map or good copy (scale 1:24,000) indicating the location of the proposed injection well or wells, and all other injection and withdrawal wells within one-quarter mile of the facility boundary;
(5) Ownership of facility;
(6) Name and address of lessor, if applicant is a lessee, and written consent of the property owner;
(7) Name and address of legal contact;

(8) Name of proposed operator;
(9) Nature and source of injected fluid;
(10) Proposed design capacity and operating volume of injected fluid;
(11) Number and type of injection wells, including construction materials and procedures;
(12) Elevation section for proposed well or wells, as found on the application form;
(13) Description of injection system, including emergency standby or monitoring wells, if any, and system blueprints;
(14) Details of proposed injection testing, the duration of which shall be for not less than twelve hours, and preferably for twenty-four hours;
(15) For injection wells sited mauka of the UIC line, water quality data, including, at a minimum, values for chloride, total dissolved solids, and coliform, from several of the nearest water supply wells;
(16) Number of each type of injection well actually constructed, including emergency standby and monitoring wells, if any;
(17) Well log maintained by a geologist, including:
    (A) Lithology of injection interval or intervals and confining formation or formations;
    (B) Physical and structural characteristics of the formations encountered;
    (C) Initial water level, and subsequent water levels as fluctuations occur, especially for artesian conditions; and
    (D) Tidal fluctuations and efficiency;
(18) Elevation section, as found on the application form, showing exact final dimensions for each of the injection wells and materials used in construction;
(19) Complete results of injection testing, including maximum capacity;
(20) Water quality data, if required;
(21) Nature and source of formation water;
(22) Description of operating plans, including identification of legal operator, maximum and average volumes of injected fluids, number of hours per day of use, and degree and type of treatment, if any.

(b) When the application is for a proposed injection well, the applicant shall first submit the information required under subsection (a)(1) to (a)(15) of this section. This submittal shall be prepared and signed by a licensed professional engineer or a geologist. When an application is prepared by an engineer it shall also bear the professional seal of the engineer. No authorization to construct shall be issued until the information is provided.

(c) Upon completion of the proposed injection well(s), the applicant shall submit the information required in subsection (a)(16) to (a)(22) of this section. This submittal shall be signed by the licensed professional engineer and geologist who prepared the documents and bear the professional seal of the engineer. No authorization to operate shall be issued until the information is provided.

(d) Applicants for proposed subclass C or subclass D injection wells shall not be required to submit the information required in subsection (a)(10), (a)(14), (a)(15), (a)(17), (a)(19), (a)(20), and (a)(21) of this section, unless any or all of these subsections are deemed appropriate and are specifically requested by the director. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §§340E-2 and 340E-9, 40 CFR §§144.25, 144.26 and 144.33)

§11-23-14 Public notice of proposed wells injecting into USDW. (a) The director shall notify the public of every application for a well proposing to inject into an underground source of drinking water in a manner designed to inform interested and potentially interested persons. Public notice procedures shall include at least the following:

(1) Notice shall be circulated within the geographical area in which the proposed injection is located. The circulation shall, at the discretion of the director, include either or both of the following:
   (A) Posting in the post office and public places of the municipality nearest the premises of the applicant in which the injection well facility is located; and
   (B) Publishing in local newspapers and periodicals or in a daily newspaper of general circulation;

(2) Notice shall be mailed to any person or group upon request; and

(3) The director shall add to a mailing list the name of any person or group who requests copies of notices for all UIC applications which propose the use of a USDW for injection purposes within the State or a certain geographical area.

(b) The director shall provide a period of not less than thirty days following the date of the public notice, during which time interested persons may submit their written views with respect to the UIC application. All written comments submitted during the thirty-day comment period shall be retained by the director and considered in the formulation of the final determination with respect to the UIC application. The period for comment may be extended at the discretion of the director.

(c) The public notice shall include at least the following:

(1) Name, address and phone number of the agency issuing the public notice;

(2) Name and address of each applicant;

(3) Brief description of each applicant's activities or operations which intend to utilize the injection wells described in the UIC application;

(4) A brief description of the procedures for the formulation of final determinations, including the thirty-day comment period required by subsection (b) of this section and any other means by which interested persons may influence or comment upon those determinations; and

(5) Address and phone number of the state agency premises at which interested persons may obtain further information; and may inspect and copy UIC forms and related documents. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §145.31)

§11-23-15 Public hearings. (a) An applicant or any interested person or group of persons may request or petition the department for a public hearing with respect to UIC applications which have been publicly noticed pursuant to section 11-23-14. Within thirty days of the publication date of the public notice in the major daily newspapers, an applicant or any interested person or persons may request or petition for a public hearing, and shall indicate the interest of the party filing the request and their reason or reasons why a hearing is warranted.

(b) A hearing may be held if the director determines that there is significant public interest. Any hearing brought pursuant to this section shall be held in the geographical area of the proposed injection or other appropriate area, at the discretion of the director, and may, as appropriate with respect to geographic area, consider more than one UIC permit application.

(c) The public shall be given public notice of any hearing held pursuant to this section. The notice for the hearing shall include at least the following:

(1) Notice shall be published at least once in a newspaper of general circulation within the geographical area of the injection site;

(2) Notice shall be sent to all persons who received a copy of the notice for the UIC permit application;

(3) Notice shall be mailed to any person or group upon request; and

(4) Notice shall be issued at least thirty days in advance of the hearing.

(d) The public notice of any hearing held pursuant to this section shall include at least the following information:

(1) Name, address and phone number of agency holding the public hearing;

(2) Name and address of each UIC applicant whose application will be considered at the hearing;

(3) Name of USDW area where injection is proposed and a short description of the underground source of drinking water aquifer;

(4) A brief reference to the public notice issued for each UIC application being considered, including identification number and date of issuance;

(5) Information regarding the time and location of the hearing;

(6) The purpose of the hearing;

(7) A concise statement of the issues raised by the persons requesting the hearing;

(8) Address and phone number of the state agency premises at which interested persons may obtain further information, and inspect and copy UIC forms and related documents; and

(9) A brief description of the nature of the hearing, including the rules and procedures to be followed.

[Eff. 7/6/84; comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §145.31)

§11-23-16 Permit issuance. (a) The director shall issue a UIC permit for wells which propose to inject into exempted aquifers on the following basis:

(1) Existing or new injection wells do not or will not endanger the quality of underground sources of drinking water.

(2) Existing or new injection wells are designed and are or will be constructed or modified to operate without causing a violation of these rules or other applicable laws.

(3) Proposed injection wells are designed and built in compliance with the standards and limitations stated in sections 11-23-07 to 11-23-10.

(b) The issuance of a UIC permit for wells which propose to inject into USDW shall be based, in addition to subsection (a)(1) to (a)(3) of this section, upon the evaluation of the contamination potential of the local water quality by the injection fluids and the water development potential for public or private consumption. The public shall have an opportunity to present information about these aspects of the proposed project.

(c) The director may issue a UIC permit for any period of time, not to exceed five years.

(d) The director shall review applications for reissuance of UIC permits. Applications for reissuance must be filed at least 180 days prior to UIC permit expiration. UIC permits may be reissued based upon the submission and review of data, as outlined in section 11-23-13, as deemed appropriate by the director at that time.

(e) The UIC permit shall not be transferable from the injection well owner to any other person without the approval of the director. Request for transfer from one person to another shall be made on an application form furnished by the director along with any other data deemed appropriate. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §§340E-2 and 340E-9, 40 CFR §§144.11, 144.12, 144.36, 144.38, 144.39 and 144.41)

§11-23-17 Existing injection well registration. (a) The application procedures for a UIC permit, as stated in section 11-23-12, shall apply to owners of existing injection well facilities.

(b) By August 6, 1984, the owner of any existing injection well or wells shall notify the department of the existence of the well, whether or not in use, and shall provide the department with the information required by section 11-23-13(a)(1) through (a)(7).

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(c) The owner or operator of any existing injection well or wells shall further, by January 6, 1985, submit to the department information concerning the construction and operating characteristics of such existing wells as required by section 11-23-13(a)(16) through (a)(22).

(d) No existing injection well, including those sited in exempted aquifers, shall be permitted to operate without a UIC permit from the department. The owner of an existing injection well shall obtain a UIC permit by July 6, 1985. The permit shall be issued upon demonstration by the injection well owner that the well's operation does not violate the conditions stated in sections 11-23-10(a), 11-23-11(b) and 11-23-16(a)(1).

(e) By July 6, 1987, the state shall assess all existing injection wells to determine their impact on underground sources of drinking water. Subclass A wells shall be issued a permit until such time that a sewage collection system serves the area if they meet the following provisions:

(1) The application is properly completed;

(2) The injected fluids remain non-polluting to drinking water sources; and

(3) The existing treatment facility design capacity is not exceeded.

(f) Existing wells of any subclass, which are determined to be polluting underground sources of drinking water shall have one year from the time of determination to effect corrective actions. If the pollution is not abated, the permit shall not be renewed or shall be suspended or revoked. [Eff. 7/6/84; am and comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.15, 144.26, 144.31, 144.33 and 146.52)

§11-23-18 Monitoring and reporting requirements. (a) The operator of any injection well or wells shall keep detailed records of the operation of the well or wells, including, but not limited to, the type and quantity of injected fluids, and the method and rate of injection for each well.

(b) If the operation of the injection well or wells is additionally regulated by other pollution control programs, e.g., National Pollution Discharge Elimination System (NPDES), the adherence to their monitoring and reporting requirements shall be considered a requirement of this chapter.

(c) The owner of any injection well or wells shall within one month report any change in ownership to the director in writing. Until such time as the notice of change in ownership is submitted, the registered owner shall be responsible for the operation of the well or wells and for damages resulting from improper operation of the well or wells. [Eff. 7/6/84; comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.51 and 144.54)

§11-23-19 Plugging and abandonment requirements. (a) Any owner who wishes to abandon an injection well shall submit an application, in accordance with section 11-23-12, containing the details of the proposed abandonment. The department may require an abandoned well to be plugged in a manner which will not allow detrimental movement of fluids between formations. If required, plugging shall be completed by grouting with the tremie method in accordance with the Honolulu Board of Water Supply's "Water System Standards", dated March, 1977; or by some other method found appropriate and acceptable to the department.

(b) The department may order an injection well to be plugged and abandoned when it no longer performs its intended purpose, or when it is determined to be a threat to the ground water resource. The owner shall schedule the plugging so that departmental staff may be present to monitor the abandonment operation. [Eff. 7/6/84; comp] (Auth: HRS §340E-2) (Imp: HRS §340E-2, 40 CFR §§144.40 and 144.52(a))

§11-23-20 Revocation, suspension or revision of UIC permits. (a) Each UIC permit shall be subject to revocation, suspension or revision by the director if, after notice and opportunity for a contested hearing, it is determined that:

(1) There is a violation of any term or condition of the UIC permit; or
(2) The UIC permit was obtained by misrepresentation, or failure to fully disclose all relevant facts; or
(3) The UIC permit was willfully defaced, altered, forged or falsified; or
(4) There is a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted injection; or
(5) There is a failure to comply with these rules or any other applicable rules or laws.

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(b) In taking any action the director may consider operating records, compliance investigations, or other information regarding the injection well facility or impact on the USDW aquifer. [Eff. 7/6/84; comp] (Auth: HRS 340E-2) (Imp: HRS 340E-2, 40 CFR §145.31)

§11-23-21 Inspection and entry. The director shall have the right:

(1) To enter premises on which any injection well system is located;
(2) To inspect any equipment, operation, or sampling of any injection well system;
(3) To take effluent samples from any injection well system; and
(4) To have access to and copy any record required to be kept pursuant to this chapter. [Eff. and comp] (Auth: HRS 340E-2, 340E-9) (Imp. HRS 340E-2, 340E-9; 40 CFR 144.51)

§11-23-22 Penalties. Any person who violates any provision of this chapter shall be subject to the penalties provided in section 340E-8, HRS. Compliance with a corrective order shall not excuse the basic violation. [Eff. 7/6/84; am, comp and ren §11-23-21] (Auth: HRS §340E-7) (Imp: HRS §340E-8, 40 CFR §§144.11 and 145.13)

§11-23-23 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the application of such provision to other persons or circumstances, and the remainder of this chapter, shall not be affected thereby." [Eff. 7/6/84; comp and ren §11-23-22] (Auth: HRS §340E-9) (Imp: HRS §340E-9)

The amendments to and compilation of Hawaii Administrative Rules, Title 11, Chapter 23, Underground Injection Control, on the Summary Page dated _____, were adopted on _____, following a public hearing conducted on June 13, 1991 by means of a tele-video conference communication held on Oahu with simultaneous transmission to Hilo, Hawaii and Lihue, Kauai, after the public notice was printed in the Honolulu Advertiser, Hawaii Tribune-Herald, West Hawaii Today, Maui News, and Kauai Times, on April 24, 1991.

These rules shall take effect ten days after filing with the Office of the Lieutenant Governor.

_____
JOHN C. LEWIN, M.D.
Director of Health

Dated:_____

APPROVED:

_____
JOHN WAIHEE
Governor
State of Hawaii

Dated:_____

APPROVED AS TO FORM:

_____
Deputy Attorney General

_____
Filed